

7. Optical interference coating comprising interleaved thin-film stacks

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INVENTOR(S)- GASLOLI, Paul, J. 89 Hovey Street Watertown, MA 02172 US

PATENT ASSIGNEE(S)- OSRAM SYLVANIA INC. (286495) 100 Endicott Street Danvers, MA 01823
US DESG. COUNTRIES- BE; DE; FR; GB; NL
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ATTORNEY, AGENT, OR FIRM- Butler, Michael John, (29061), Frank B. Dehn & Co., European Patent Attorneys, 179 Queen Victoria Street, London EC4V 4EL, GB

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EXEMPLARY CLAIMS- An optical interference coating for reflecting infrared radiation and transmitting visible light comprising:

one or more interleaved stacks said Interleaved stacks comprising a first stack containing three alternating layers of high and low refractive index materials of the form (L/a bH L/a), and a second stack containing three alternating layers of high and low refractive index materials of the form (H/a bL H/a);

wherein L and H are a low and a high index of refraction material respectively, L and H each being defined as having an optical thickness of a multiple of a quarter-wave of the stack wavelength; and

wherein a and b are predetermined values in the ranges of:

1.75 (less than) a (less than) 2.5 and 2.75 (less than) b (less than) 3.25.

A coating as claimed in claim 1, further comprising a stack of the form (L/a bH L/a) added to one side of the

one or more interleaved stacks to achieve symmetry.

A coating as claimed in claim 1 or 2, further comprising one or more stacks of the form (L/2 H L/2) added to the one or more interleaved stacks to define the transmission bandwidth for an IR reflector.

A coating as claimed in claims 1, 2 or 3, wherein the low refractive index material has a value of between approximately 1.40-1.50 and the high index of refraction material has a value of between approximately 2.0-

2.2.